What is claimed is:

1. An epicyclic transmission for controlling the speed and direction of rotation of a vehicle wheel, comprising:

a drive shaft having an axis of rotation;

a drive gear joined to the drive shaft for imparting rotation to the drive shaft about said axis;

a gear arrangement mounted on the drive shaft, said gear arrangement being rotatable about both the axis of rotation of the drive shaft and about its own rotational axis;

a driven gear mounted on the drive shaft between said drive gear and the gear arrangement in operative relationship with the gear arrangement, said driven gear being rotatable about said axis of rotation of the drive shaft independently of rotation of the drive shaft, said drive and driven gears having surfaces facing one another provided with respective concavities therein;

a pivotally adjustable disk having an edge contacting the drive and driven gears within the concavities for controlling the speed and direction of rotation of the driven gear in accordance with the position of the disk;

an additional gear joined to the drive shaft for rotation therewith, said additional gear being positioned in operational relationship with the gear arrangement on an opposite side of the gear arrangement from the driven gear; and

a wheel-driving output element operatively engaged with the gear arrangement.

2. A transmission according to Claim 1, wherein said gear arrangement comprises at least two gears radially disposed relative to the axis of rotation of the drive shaft.

3. A transmission according to Claim 2, wherein said at least two gears are pinion gears.

4. A transmission according to Claim 2, wherein said wheel-driving output comprises a gear which engages the said gear arrangement.

5. A transmission according to Claim 2, further comprising a connector element associated with each of said at least two gears, said connector element being joined to the wheel-driving output element to translate rotation of the gear arrangement about the axis of rotation of the drive shaft to rotation of the wheel-driving element.

6. A transmission according to Claim 5, wherein said at least two gears are pinion gears and wherein said connector elements are pins each having a shaft positioned along a respective axis of rotation of said at least two gears, the said at least two gears being rotatable about their respective pin shafts.

7. A transmission according to Claim 2, wherein said driven gear includes teeth arranged to cooperate with teeth provided in said gear arrangement.

8. A transmission according to Claim 7, wherein said teeth are located on an opposite side of the driven gear from the surface in which said annular concavity is provided.

9. A transmission according to Claim 1, wherein when said disk is positioned in a plane parallel to the axis of rotation of the drive shaft, the gear arrangement rotates only about its rotational axis.

10. A transmission according to Claim 1, wherein when said disk contacts the drive gear at a location closer to the axis of rotation of the drive shaft than where the disk contacts the driven shaft, the gear arrangement rotates about the axis of rotation of the drive shaft in a first direction as well as about its rotational axis, and wherein when said disk is in a position in which the disk contacts the drive gear at a location farther away from the axis of rotation of the drive shaft than where the disk contacts the driven shaft, the gear arrangement rotates about the axis of rotation of the drive shaft in an opposite direction as well as about its rotational axis.

11. A transmission according to Claim 1, wherein said gear arrangement is a pinion gear.

12. A transmission according to Claim 1, wherein said wheel-driving output comprises a gear which engages the gear arrangement.

13. A transmission according to Claim 1, further comprising a connector element associated with said gear arrangement, said connector element being joined to the wheel-driving output element to translate rotation of the gear arrangement about the axis of rotation of the drive shaft to rotation of the wheel-driving element.

14. A transmission according to Claim 13, wherein said gear arrangement is a pinion gear and wherein said connector element is a pin having a shaft positioned along the rotational axis of said gear arrangement, the gear arrangement being rotatable about the pin shaft.

15. A transmission according to Claim 1, wherein said driven gear includes teeth arranged to cooperate with teeth provided in said gear arrangement.

16. A transmission according to Claim 15, wherein said teeth are located on an opposite side of the driven gear from the surface in which said annular concavity is provided.

17. A transmission according to Claim 1, wherein said gear arrangement comprises at least two gears disposed on opposite sides of the axis of rotation of the drive shaft and having an aligned axis of rotation.

18. A transmission according to Claim 17, wherein said at least two gears are pinion gears.

19. A transmission according to Claim 17, wherein said wheel-driving output comprises a gear which engages the said gear arrangement.

20. A transmission according to Claim 17, further comprising a connector element associate with each of said at least two gears, said connector element being joined to the wheel-driving output element to translate rotation of the gear arrangement about the axis of rotation of the drive shaft to rotation of the wheel-driving element.

21. A transmission according to Claim 20, wherein said at least two gears are pinion gears and wherein said connector elements are pins each having a shaft positioned along the aligned axis of rotation of said at least two gears, the said at least two gears being rotatable about their respective pin shafts.